

**REMARKS**

Claims 1-4 are pending in this application. By this Amendment, claim 1 is amended. Reconsideration based on the above amendments and following remarks is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance, for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because, e.g., they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

**I. The Claims Define Allowable Subject Matter****A. Claim Rejections 35 U.S.C. §102**

The Office Action rejects claims 1-3 under 35 U.S.C. §102(b) as being unpatentable over U.S. Patent No. 5,850,325 to Miyauchi et al. (Miyauchi). This rejection is respectfully traversed.

The Office Action asserts that Miyauchi discloses a thin-film magnetic head comprising a medium facing surface that faces toward a recording medium; a read head including a magnetoresistive element 200 and a first shield layer 400 and a second shield layer 311 for shielding the magnetoresistive element, the first and second shield layers having portions that are located in regions on a side of the medium facing surface and opposed to each other, the magnetoresistive element being placed between the portions of the shield layers; and a write head including a first magnetic layer 312 and a second magnetic layer 320

that are magnetically coupled to each other and include magnetic pole portions opposed to each other and placed in regions on a side of the medium facing surface, each of the magnetic layers including at least one layer; a gap layer 340 provided between the pole portions of the first and second magnetic layers; and a thin-film coil 330 at least part of which is placed between the first and second magnetic layers, the at least part of the coil being insulated from the first and second magnetic layers; wherein the read head and the write head are placed such that one of the shield layers of the read head and one of the magnetic layers of the write head are opposed to each other; the thin-film magnetic head further comprising a magnetism intercepting layer 313 provided between the one of the shield layers and the one of the magnetic layers, the magnetism intercepting layer having a thickness of 0.2  $\mu\text{m}$  or greater and made of a nonmagnetic metal material that is capable of being formed through plating. The Office Action cites Fig. 5 and col. 6, lines 31-32, col. 7, lines 49-50.

It is respectfully submitted that Miyauchi fails to disclose or teach all of the features recited in claim 1. Specifically, Miyauchi fails to disclose or teach the feature wherein one of the shield layers of the read head, the one of the magnetic layers of the write head, and the magnetism intercepting layer have substantially the same planar shape as recited in amended claim 1.

The specification at least on page 18, lines 12-14 discloses that the one of the shield layers (the top shield layer 8) of the read head, the one of the magnetic layers (the bottom pole layer 10) of the write head, and the magnetism intercepting layer 9 are formed using the single frame 54. It is self-evident that those three layers formed using the single frame have substantially the same planar shape.

In the thin-film magnetic head disclosed by Miyauchi the magnetic shield film 311 and the first magnetic film 312 are opposed to each other, with the non-magnetic film 313 in between. However, the magnetic shield film 311 and the first magnetic film 312 have

different planar shapes (see Fig. 4 and Fig. 11 of Miyauchi). Miyauchi thus fails to disclose the claimed invention.

It is respectfully submitted that since claims 2 and 3 depend from claim 1, that these claims are allowable at least for the reasons stated regarding claim 1.

Withdrawal of the rejection of claims 1-3 is respectfully requested.

The Office Action rejects claims 1 and 2 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,445,537 to Cates. This rejection is respectfully traversed.

The Office Action asserts that Cates teaches a thin film magnetic head comprising a medium facing surface 122 that faces toward a recording medium; a read head 102 including a magnetoresistive element 108 and a first shield layer 112 and a second shield layer 110 for shielding the magnetoresistive element, the first and second shield layers having portions that are located in regions on a side of the medium facing surface and opposed to each other, the magnetoresistive element being placed between the portions of the shield layers; and a write head 202 including the first magnetic layer 226 and a second magnetic layer 228 that are magnetically coupled to each other and include magnetic pole portions opposed to each other and placed in regions on a side of the medium facing surface, each of the magnetic layers including at least one layer; a gap layer 230 provided between the pole portions of the first and second magnetic layers; and a thin-film coil 332 at least part of which is placed between the first and second magnetic layers, the at least part of the coil being insulated from the first and second magnetic layers (via 232); wherein the read head and the write head are placed such that one of the shield layers of read head and one of the magnetic layers of the write head are opposed to each other; the thin-film magnetic head further comprising a magnetism intercepting layer 94 provided between the one of the shield layers and the one of the magnetic layers, the magnetism intercepting layer having a thickness of 0.2  $\mu\text{m}$  or greater and

made of a non-magnetic metal material that is capable of being formed through plating. The Office Action cites Fig. 9, col. 8, lines 13-15 and lines 25-28.

It is respectfully submitted that Cates fails to disclose or teach all of the features recited in claim 1. Specifically, Cates fails to disclose or teach wherein one of the shield layers of the read head the one of the magnetic layers of the write head and the magnetism intercepting layer have substantially the same planar shape by being formed using a single frame as recited in claim 1.

In the thin-film magnetic head disclosed by Cates, the top shield 110 and the bottom pole 226 are opposed to each other, with the protective layer 94 in between. However, Cates fails to disclose that the top shield 110, the bottom pole 226 and the protective layer 94 have substantially the same planar shape.

Accordingly, neither of the applied references disclose the claimed invention.

It is respectfully submitted that since claim 2 depends from claim 1, claim 2 is allowable at least for the reasons stated regarding claim 1.

Withdrawal of the rejection of claims 1-2 is respectfully requested.

#### **B. Claim Rejections Under 35 U.S.C. §103**

The Office Action rejects claim 4 under 35 U.S.C. §103(a) as being unpatentable over Miyauchi. This rejection is respectfully traversed.

It is respectfully submitted that regarding claim 4 that Miyauchi is deficient for the reasons stated above regarding claim 1. In addition, since claim 4 depends from claim 1, claim 4 is allowable at least for the reasons stated regarding claim 1.

Withdrawal of the rejection of claim 4 is respectfully requested.

**II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-4 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Petition for Extension of Time

Date: March 22, 2004

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